

CLAIMS

1. An apparatus for forming an air bag cover, the apparatus comprising:

5 a mold for forming a cavity in which a resin air bag cover including an air bag door is made;

 a grooving blade for forming a break groove defining the air bag door at the air bag cover; and

10 a supporting member for supporting the air bag door of the air bag cover made in the cavity;

 wherein the mold includes a movable core reciprocally movable in a first reciprocal direction parallel to a line connecting a position where the core contacts the air bag cover and a position where the core is separated from the air bag
15 cover, the supporting member coming into contact with the air bag door when the core is separated from the air bag door.

2. The apparatus according to claim 1, wherein the supporting member is a rod extending through the movable core.

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3. The apparatus according to claim 1, wherein the movable core includes a recess for forming a rib at the air bag door, the supporting member contacting with the air bag door at a portion adjacent to the rib.

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4. The apparatus according to claim 1 further comprising: a follower block connected to the movable core and reciprocally

movable in the first reciprocal direction; a drive block contacting the follower block; and a first drive source for reciprocally moving the drive block along a second reciprocal direction perpendicular to the first reciprocal direction,
5 wherein the follower block is moved in the first reciprocal direction by the movement of the drive block in the second reciprocal direction.

5. The apparatus according to claim 4, wherein at least one
10 of the drive block and the follower block is formed with an inclined cam surface for moving the follower block in the first reciprocal direction.

6. The apparatus according to claim 4, wherein the drive block
15 is formed with an inclined cam surface for moving the follower block in the first reciprocal direction and also formed with a pressure receiving surface next to the inclined cam surface, the pressure receiving surface being parallel to the second reciprocal direction.

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7. The apparatus according to claim 6, wherein the follower
block is formed with an inclined cam surface which is brought into contact with the inclined cam surface of the drive block and also formed with a plan surface next to the inclined cam
25 surface of the follower block, the plan surface of the follower block being brought into contact with the pressure receiving surface of the drive block.

8. The apparatus according to claim 4 further comprising a link for connecting the drive block and the follower block, the link pulling the follower block away from the air bag door in accordance with the movement of the drive block.

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9. The apparatus according to claim 8, wherein the link includes a first end and a second end spaced from each other, the first end rotatably attached to the drive block, the second end projecting into a recess formed in the follower block.

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10. The apparatus according to claim 4 further comprising a second drive source for moving the grooving blade in the first reciprocal direction, the second drive source moving the grooving blade between a position to be inserted in the cavity and a position to be moved out of the cavity.

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11. The apparatus according to claim 10, wherein the mold comprises an upper portion and a lower portion that work together to form the cavity, the lower portion including a support body and an auxiliary block removable from the body, the auxiliary block being formed with a space for movably incorporating the grooving blade in the first reciprocal direction, the second drive source being provided at the support body.

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12. The apparatus according to claim 11, wherein the space of the auxiliary block further accommodates the follower

block and the drive block, the first drive source being provided at the support body.

13. The apparatus according to claim 12, wherein the first
5 drive source is connected to the drive block via a connecting rod removably attached to the drive block, the second drive source being connected to the grooving blade via another connecting rod removably attached to the grooving blade.

10 14. The apparatus according to claim 1 further comprising a cooling means for cooling the movable core.

15 15. The apparatus according to claim 14, wherein the cooling means includes a duct provided in the movable core through which cooling medium passes.

16. The apparatus according to claim 15, wherein the cooling means further includes another duct which is provided in the follower block and connected to the duct in the movable core.